

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-10, 12, 15-21, 23, 26-35 are presently active in this case. The present Amendment amends Claims 1-6, 9-10, 12, 20-21, 23, 31 and 33; and adds new Claim 35 without introducing any new matter; and cancels Claims 11, 13-14, 22 and 24-25 without prejudice or disclaimer.

The outstanding Office Action rejected Claims 1-4, 8-12, 16, 20-23, 27, 31 and 33 under 35 U.S.C. §102(b) as anticipated by Shimura et al. (U.S. Patent No. 6,052,549, herein "Shimura"). Claims 18-19 and 29-30 were rejected under 35 U.S.C. §103(a) as unpatentable over Shimura in view of Bessho (U.S. Patent No. 6,496,673). Claims 7, 15 and 26 are rejected under 35 U.S.C. §103(a) as unpatentable over Shimura in view of Murata (U.S. Patent No. 6,041,209). Claims 5, 6, 13, 14, 24 and 25 were indicated as allowable if rewritten in independent form.

Applicants acknowledge with appreciation the indication of allowable subject matter. In response, independent Claims 9, 20, 31 and 33 are amended to recite all the features of allowable, dependent Claim 5. Consequently, Claims 11, 13-14, 22, 24-25 are cancelled. In addition, new Claim 35 is presented, reciting all the features of original Claim 1 and allowable, dependent Claim 5. Furthermore, Claims 1-6, 9-10, 12, 20-21, 23, 31 and 33 are amended to correct minor formalities. Since these changes are merely formal in nature, they are not believed to raise a question of new matter.

To vary the scope of protection in the claims, Claim 1 is amended to recite "the frequency of the alternating current voltage being in a range between 2000 to 4500Hz," a feature finding non-limiting support in Applicants' specification at page 20, lines 7-13. In light of the amendments to independent Claim 1, Applicants respectfully traverse the

rejection of Claim 1, and all associated dependent claims, and request reconsideration, as next discussed.

Briefly recapitulating, Claim 1 relates to a charging device, including a charging member configured to be applied with a voltage wherein an alternating current voltage is superimposed on a direct current voltage to charge an image carrier, wherein a following relationship is satisfied: $7 \leq f/v \leq 17$, “f” being a frequency (Hz) of the alternating current voltage, and “v” being a moving speed (mm/sec) of the image carrier, the frequency of the alternating current voltage being in a range between 2000 to 4500Hz.

As explained in Applicants’ specification from page 11, line 23, to page 12, line 2, Claim 1 proposes a charging device that can prevent occurrence of filing phenomenon, and can also extend life of an image carrier and a charging member.

Turning now to the applied reference, Shimura describes a charging roller, being in contact with a chargeable member, wherein the charging roller is applied with an AC voltage of the frequency of 1000Hz.¹ However, Shimura fails to teach or suggest the frequency of the alternating current voltage being in a range between 2000 to 4500Hz, as recited in amended, independent Claim 1. All the remaining references Bessho and Murata, relied upon by the outstanding Office Action to form 35 U.S.C. §103(a) rejection, even if we assume that such combination is proper, fail to teach an AC voltage in the claimed frequency range of 2000 to 4500Hz. While Bessho uses a frequency of 1800Hz,² Murata explains in column 13, lines 50-57 that a frequency of 150Hz is used

Therefore, the applied references fail to teach or suggest every feature recited in Applicants’ claims, so that Claims 1-8 are believed to be patentably distinct over the applied

¹ See Shimura in the Abstract, and at column 6, lines 1-6.

² See Bessho at column 19, lines 29-43.

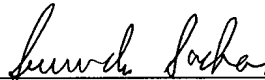
references. Accordingly, Applicants respectfully traverse, and request reconsideration of, the rejection based on Shimura.³

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-10, 12, 15-21, 23, 26-35 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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³ See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."